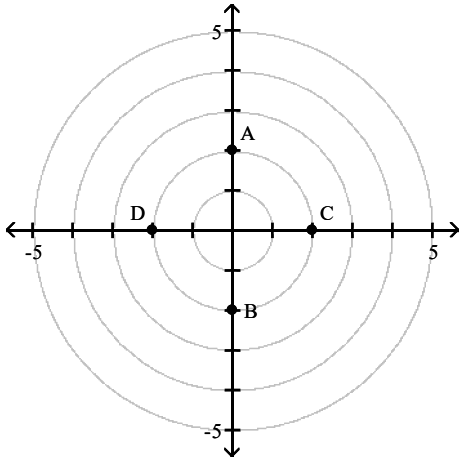


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Match the point in polar coordinates with either A, B, C, or D on the graph.

1) $(2, 0)$

1) _____



A) B

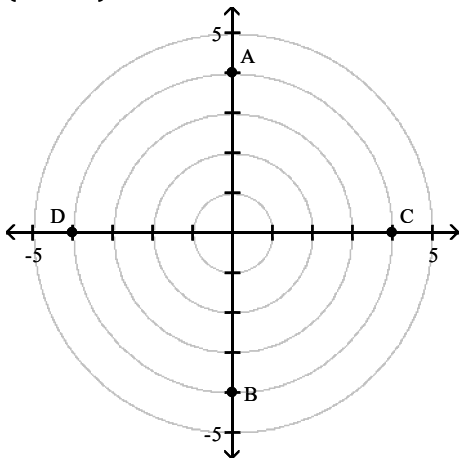
B) C

C) D

D) A

2) $\left(-4, -\frac{\pi}{2}\right)$

2) _____



A) A

B) B

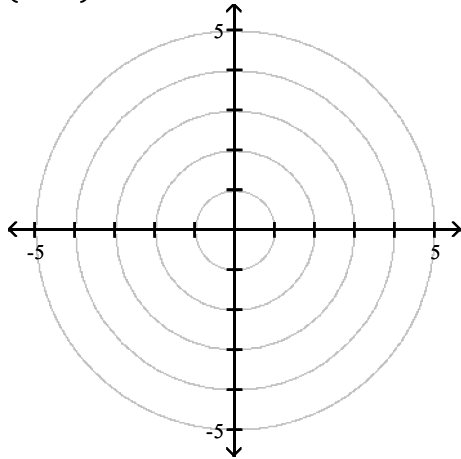
C) D

D) C

Use a polar coordinate system to plot the point with the given polar coordinates.

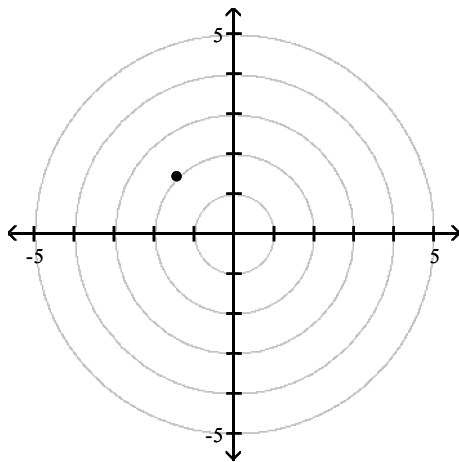
3) $\left(2, \frac{3\pi}{4}\right)$

3) _____

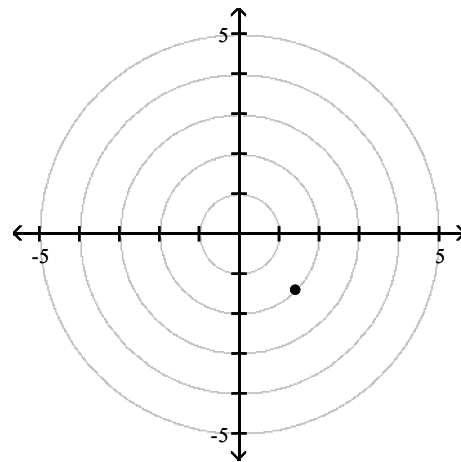


A)

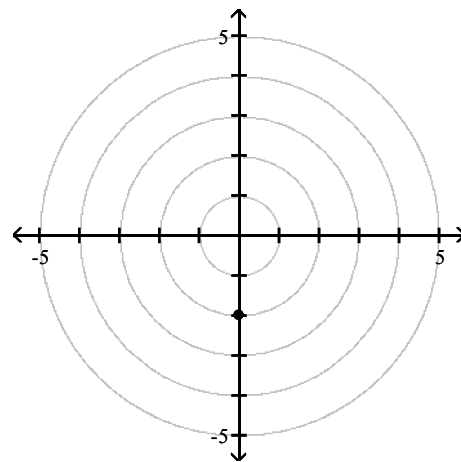
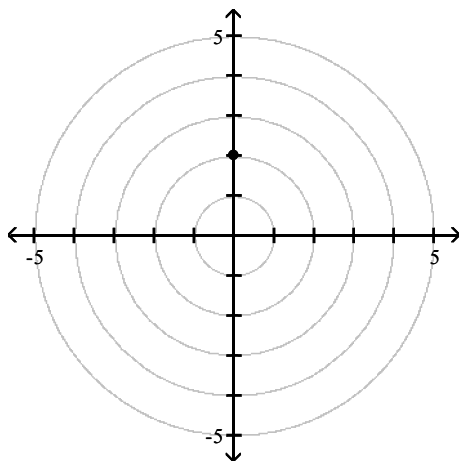
B)



C)

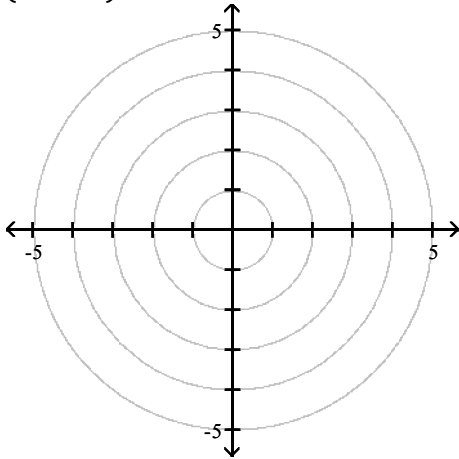


D)

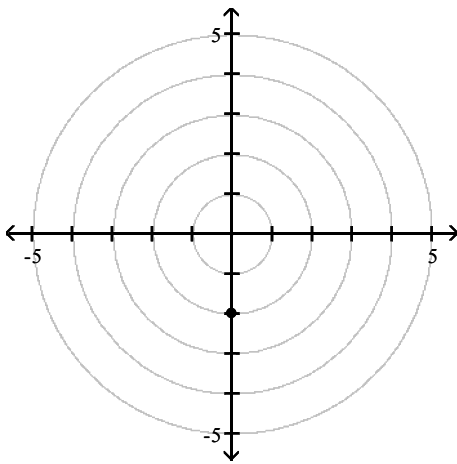


4) $\left(-2, \frac{-5\pi}{4}\right)$

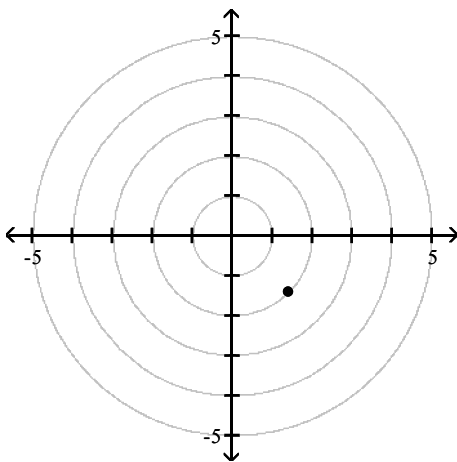
4) _____



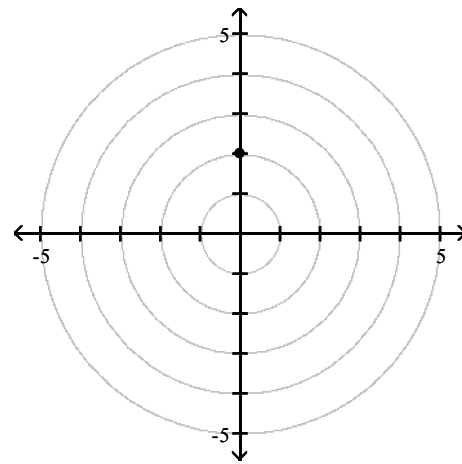
A)



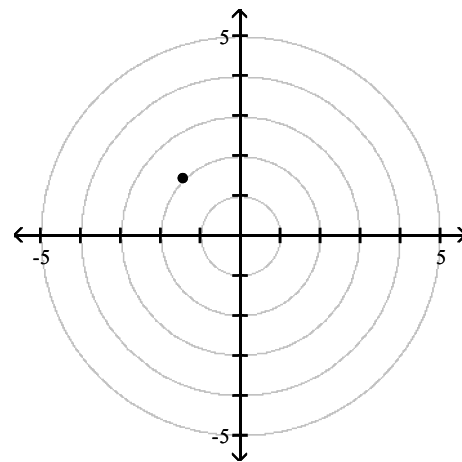
C)



B)



D)



SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the problem.

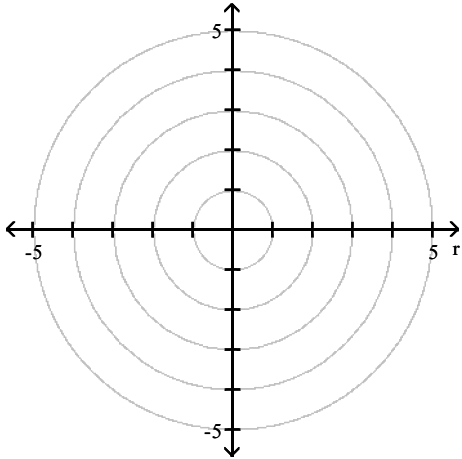
5) Plot the point $\left(4, \frac{\pi}{6}\right)$ and find other polar coordinates (r, θ) of the point for which:

5) _____

(a) $r > 0, -2\pi \leq \theta < 0$

(b) $r < 0, 0 \leq \theta < 2\pi$

(c) $r > 0, 2\pi \leq \theta < 4\pi$

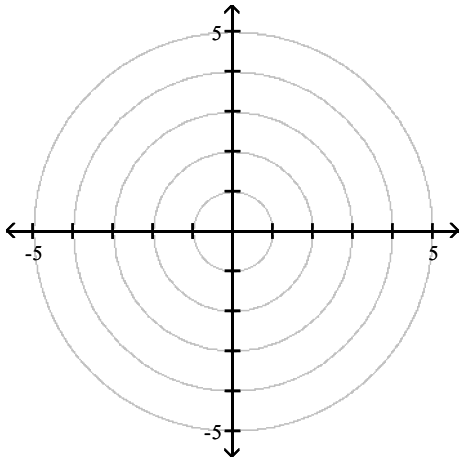


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

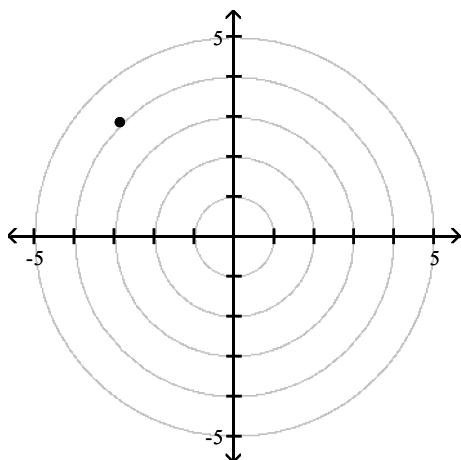
Use a polar coordinate system to plot the point with the given polar coordinates.

6) $\left(-4, \frac{-5\pi}{4}\right)$

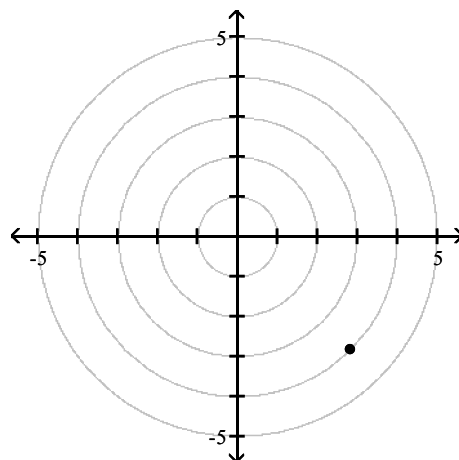
6) _____



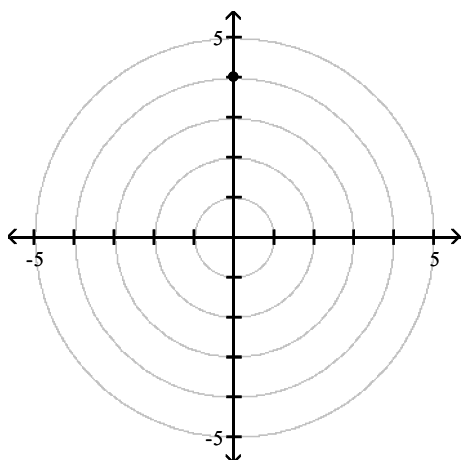
A)



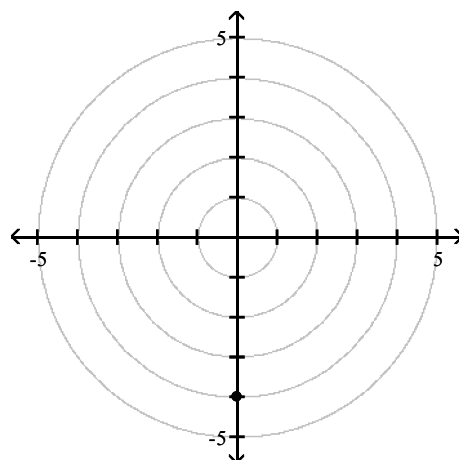
B)



C)



D)



Find another representation, (r, θ) , for the point under the given conditions.

7) $\left(2, \frac{\pi}{6}\right)$, $r > 0$ and $2\pi < \theta < 4\pi$

A) $\left(2, \frac{13}{6}\pi\right)$

B) $\left(2, \frac{7}{6}\pi\right)$

C) $\left(2, -\frac{11}{6}\pi\right)$

D) $\left(2, -\frac{5}{6}\pi\right)$

7) _____

8) $\left(5, \frac{\pi}{2}\right)$, $r < 0$ and $0 < \theta < 2\pi$

A) $\left(-5, -\frac{3}{2}\pi\right)$

B) $\left(-5, \frac{5}{2}\pi\right)$

C) $\left(-5, -\frac{1}{2}\pi\right)$

D) $\left(-5, \frac{3}{2}\pi\right)$

8) _____

9) $\left(4, \frac{\pi}{3}\right)$, $r < 0$ and $0 < \theta < 2\pi$

A) $\left(-4, -\frac{5}{3}\pi\right)$

B) $\left(-4, \frac{7}{3}\pi\right)$

C) $\left(-4, \frac{4}{3}\pi\right)$

D) $\left(-4, -\frac{2}{3}\pi\right)$

9) _____

10) $\left(3, \frac{\pi}{4}\right)$, $r > 0$ and $2\pi < \theta < 4\pi$ 10) _____
 A) $\left(3, -\frac{3}{4}\pi\right)$ B) $\left(3, -\frac{7}{4}\pi\right)$ C) $\left(3, \frac{5}{4}\pi\right)$ D) $\left(3, \frac{9}{4}\pi\right)$

11) $\left(3, \frac{\pi}{3}\right)$, $r > 0$ and $-2\pi < \theta < 0$ 11) _____
 A) $\left(3, -\frac{2}{3}\pi\right)$ B) $\left(3, -\frac{5}{3}\pi\right)$ C) $\left(3, \frac{7}{3}\pi\right)$ D) $\left(3, \frac{4}{3}\pi\right)$

12) $\left(6, \frac{\pi}{2}\right)$, $r > 0$ and $-2\pi < \theta < 0$ 12) _____
 A) $\left(6, -\frac{1}{2}\pi\right)$ B) $\left(6, -\frac{3}{2}\pi\right)$ C) $\left(6, \frac{5}{2}\pi\right)$ D) $\left(6, \frac{3}{2}\pi\right)$

13) $\left(4, \frac{\pi}{3}\right)$, $r < 0$ and $2\pi < \theta < 4\pi$ 13) _____
 A) $\left(-4, \frac{4}{3}\pi\right)$ B) $\left(-4, -\frac{8}{3}\pi\right)$ C) $\left(-4, \frac{7}{3}\pi\right)$ D) $\left(-4, \frac{10}{3}\pi\right)$

14) $\left(5, \frac{\pi}{6}\right)$, $r < 0$ and $2\pi < \theta < 4\pi$ 14) _____
 A) $\left(-5, \frac{13}{6}\pi\right)$ B) $\left(-5, \frac{7}{6}\pi\right)$ C) $\left(-5, \frac{19}{6}\pi\right)$ D) $\left(-5, -\frac{17}{6}\pi\right)$

Select the representation that does not change the location of the given point.

15) $(4, 110^\circ)$ 15) _____
 A) $(-4, 200^\circ)$ B) $(4, 470^\circ)$ C) $(4, 290^\circ)$ D) $(-4, 470^\circ)$

16) $(1, 80^\circ)$ 16) _____
 A) $(-1, 170^\circ)$ B) $(1, 260^\circ)$ C) $(-1, 440^\circ)$ D) $(1, 440^\circ)$

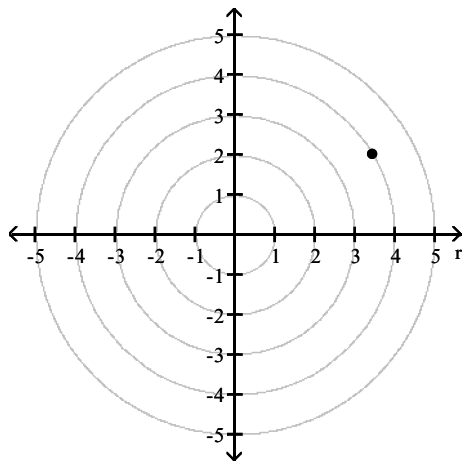
17) $(-7, 6\pi)$ 17) _____
 A) $(-7, 5\pi)$ B) $(7, 4\pi)$ C) $(-7, 7\pi)$ D) $(7, 5\pi)$

18) $(-5, 8\pi)$ 18) _____
 A) $(-5, 9\pi)$ B) $(5, 6\pi)$ C) $(-5, 7\pi)$ D) $(5, 7\pi)$

Answer Key

Testname: POLARWS1

- 1) B
- 2) A
- 3) A
- 4) C
- 5)



(a) $(4, -\frac{11\pi}{6})$

(b) $(-4, \frac{7\pi}{6})$

(c) $(4, \frac{13\pi}{6})$

- 6) B
- 7) A
- 8) D
- 9) C
- 10) D
- 11) B
- 12) B
- 13) D
- 14) C
- 15) B
- 16) D
- 17) D
- 18) D